

Objectives

The business objectives of the Transportation Permits Management System (TPMS) project include improving public safety on State highways, improving the efficiency of the Transportation Permits Branch, protecting the State highway infrastructure, and improving customer service. Each of the major objectives is discussed below.

- **Objective #1 - Improve Public Safety on State Highways** - The TPMS project will improve public safety on State highways. By acquiring a proven system that includes the controls necessary to prevent routing errors, Caltrans will ensure that each oversize and overweight load is routed only over State highways and bridges that are capable of handling the dimensions and weight of that load. Permit writer judgment will still be required, but that judgment will be supported and constrained by system processes and business rules that are uniformly applied. Information about highway and bridge conditions will be current and accurate. Conflict flags will be programmed to prohibit route approval in the absence of a formal override, preferably by a supervisor. The possibility of an accident due to driver error or equipment failure cannot be ruled out, but virtually all errors due to the permitting process itself can be eliminated.

The new TPMS system will provide a printed permit in a standardized route format within five minutes from receipt of request. In addition, the new system will prevent human error from occurring during the permit preparation phase through a series of validations and check routines. The permitted route will use standard terms that can be easily understood by the driver. Should there be a change to the route following the issuance of the permit, the system will automatically notify the owner/operator of these conditions and reissue an amended permit. In addition, maps highlighting the appropriate route will be provided.

This system objective of “improving public safety on State highways” will be met by:

- Issuing 100% error-free transportation permits
 - Providing real-time road condition and construction information
 - Eliminating use of handwritten requests and permits
 - Using state-of-the-art information technology to facilitate the request and issuance of permits.
- **Objective #2 - Improve Efficiency of Transportation Permits Branch** - The current permit writing process is essentially a manual process driven by the movement of paper. The Route Clearing Database serves only as a reference tool and is not easy to use. Most permit requests are faxed to regional Permit Offices, and the permits themselves are faxed back; but faxing does not affect the permit processing within Caltrans except, perhaps, to create problems of legibility of handwritten documents. All permit requests submitted via STARS still require verification by Caltrans permit writers. Credit card charges are manually processed using retail point-of-sale terminals. Permits are stored as hard copy, and management reports are largely absent except by supplementary logs or databases.

In contrast to the current process within Caltrans, commercially available highway permit systems support a streamlined process that is essentially electronic from beginning to end. These systems offer graphic displays of highway routes along with the ability to display increasing levels of detail about physical clearances and special conditions. Supporting databases can maintain records of trucking firms, common truck and load configurations, frequently requested routes, and issued permits. Controls can be established to ensure that no permit is issued until all relevant warning flags have been acknowledged. Credit card payments can be processed without permit writer intervention. Permits can be printed, faxed, or e-mailed (with proof of

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authentication) to the requesting party. A full range of summary reports and activity listings can be made available to management.

The system objective of “improving the efficiency of the Transportation Permits Branch” will be met by:

- Providing an integrated database accessible by all users
 - Providing automated data update of Route Clearance Database as necessary
 - Providing automated permit service for routine "envelope" load configurations
 - Eliminating the use of hand written permit requests and permits
 - Requiring the use of standardized route descriptions
 - Eliminating the use of non-electronic reference sources
- **Objective #3 - Protect the State Highway Infrastructure** – Over the past 20 years, Caltrans has completed 44 construction projects to repair damage resulting from vehicles hauling loads exceeding the bridge clearances. This has cost the State \$3,986,211 in direct bridge repair costs. In addition, it has cost the State an additional estimated \$11,000,000 (approximately \$250,000 per event) for damage inspection, design, contract preparation, and construction oversight activities. Total costs are conservatively estimated at \$14,986,211 for the 20-year period with an average annual cost of \$749,310. Additional costs for associated litigation and settlement are unknown. The new system will significantly reduce the possibility of Caltrans erroneously routing a truck on an unsafe route. Permits that are printed in a standard, easy to read format with accompanying maps should make "off route" accidents rare. With permit processing times significantly reduced, it is expected that fewer illegal (i.e. without a permit) trips will be made. As a result, more approved routes will be driven under permits, and the number of bridge hits by vehicles operating without a permit should be reduced.

The system objective of “protecting the State highway infrastructure” will be met by:

- Issuing 100% error free transportation permits
 - Eliminating use of handwritten requests and permits
 - Providing real-time road condition and construction information
 - Using state-of-the-art information technology to facilitate the request and issuance of permits
 - Issuing permits within 5 minutes from receipt of request
- **Objective #4 - Improve Customer Service** - The implementation of a new transportation permits system provides the opportunity for clarifying and strengthening the sharing of information within Caltrans and with outside stakeholders. In the case of the TPMS, new intra-departmental methods for supplying up-to-date information to the Permitting Offices about new construction and highway maintenance activities can be instituted. Timely information about new and/or temporary changes to State highway conditions is vital to a safe route clearing process. Finally, the new system could offer the trucking industry a more active role in the permitting process by giving them the opportunity for self-permitting in specified circumstances.

The benefits of the new system for the vehicle operators are significant. The average hourly cost to operate an oversize or overweight vehicle is high. Current Caltrans policy is to issue Single Trip Permits within two hours from the time the permit application is received. In most cases, permits are issued within this time frame. However, for planning purposes, the operators must expect a permit request to take up to two hours for approval. This results in significant lost opportunity costs to the industry. Any lost revenue to the industry results in lower tax revenues to

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the State Treasury. With the new system, approval is expected to take less than five minutes. This will result in a significant reduction in lost opportunity costs to the industry. In addition, vehicle operators will likely reduce their operating costs because the system will significantly lower the risk of "bridge hit" accidents that result in property damage, equipment loss, serious personal injury, and/or death.

The system objective of "improving customer service" will be met by:

- Providing 24 hour/7 day service for permits that can be automatically generated
- Issuing 100% accurate permits
- Reducing standard permit turnaround time to less than five minutes
- Improving ability for applicants to submit error-free permit applications
- Providing automated permit service for routine "envelope" load configurations
- Using state-of-the-art technology to facilitate the request and issuance of permits